

# OS-9 FAMILY SOFTWARE PRODUCTS

**Suggested Retail Prices Effective March 23, 1995**

*microware*  

---

MICROWARE SYSTEMS CORPORATION

## ISO 9001 Certification

On July 12, 1994, Microware received ISO 9001 certification from Underwriters Laboratories. Microware is the first manufacturer of real-time operating system software to obtain ISO 9001 certification, which encompasses software development, manufacturing/replication and procurement.

ISO 9001 is the most comprehensive of the ISO 9000 quality standards set forth by the International Organization for Standards. While ISO 9002 and ISO 9003 cover quality control in only certain steps of product manufacturing, ISO 9001 sets quality standards for all steps—design and development, production, final inspection and testing, and installation and service.

Microware's ISO 9001 certification becomes increasingly important to customers who also have initiated TQM standards. To maintain TQM status, these companies are encouraged to use products which are developed and sold under ISO 9001. And while ISO 9001 certified hardware vendors are relatively common, the list of system software companies who have achieved ISO 9001 certification is just beginning—with Microware.



## TABLE OF CONTENTS

	Page
STANDARD ORDERING TERMS AND INFORMATION .....	1
THE OS-9 FAMILY.....	4
Overview.....	4
OS-9 FAMILY END USER SOFTWARE PRODUCTS .....	5
Board Support Packages .....	5
68K Processors .....	5
PowerPC Processors .....	6
PC Development Packages .....	7
PC Development Pak .....	7
PC Run-Time Pak .....	7
Basic I/O Extensions.....	8
Driver Pak .....	8
SCSI Pak .....	8
PC File Manager Pak .....	8
Network I/O Extensions .....	9
Internet Support Pak .....	9
Network File System .....	9
X Windows I/O Extensions .....	10
X Windows Client Development Pak .....	10
X Windows Client Run-Time Pak .....	10
X Windows Server Support Pak .....	10
Motif Development Pak .....	10
Motif Run-Time Pak .....	11
Resident Development Tools.....	12
OS-9 Tool Kit .....	12
High Level Languages and Debuggers.....	13
BASIC .....	13
BASIC Run-Time Pak .....	13
System State Debugger .....	13
OS-9 Family Cross Development Tools .....	13
Ultra C .....	13
Productivity Tools .....	14
MShell .....	14
QD MenuMaker .....	14
PC Cross Development Tools.....	15
FasTrak for Windows .....	15
UNIX Cross Development Tools .....	16
FasTrak for UNIX .....	16
OS-9 Family Documentation .....	17
TECHNICAL SERVICES.....	18
Training and Education .....	18
Premium Support Service .....	18
Consulting and Installation Services .....	19

## STANDARD ORDERING TERMS AND INFORMATION

**Software Product Orders** All orders for Microware software products must include the following information for each software product ordered:

- Quantity
- Product Code
- Media Format Code

*OS-9 Family cross development products require two media format codes; one for the host development media format and one for the OS-9 Family target media format.*

Each section of this price list provides product codes and media format codes specific to Microware software products. Please refer to this information when ordering.

**Media Format Codes** Currently supported Media Format Codes are given below.

### Target Media Format Codes

68K	X86	Media Format Code	Physical Media Description	Media Format Description
<b>X</b>		38U0	3 1/2" floppy disks	Universal format
<b>X</b>		58U0	5 1/4" floppy disks	Universal format
<b>X</b>		TCIN	Tape cartridge	Install format
<b>X</b>		TC2B	Tape cartridge	Boot tape format
	<b>X</b>	TC2F	Tape cartridge	Fsave format
	<b>X</b>	38HD	3 1/2" HD disks	Native format

### Host Development Media Format Codes

Media Format Code	Sun 4	HP 9700	HP 9300	RS6000	PC	SGI	Physical Media Description	Media Format Description
3DOS					<b>X</b>		3 1/2" floppy disks	PC format
TCIN	<b>X</b>		<b>X</b>			<b>X</b>	Tape cartridge	"tar" format
TEIN	<b>X</b>			<b>X</b>		<b>X</b>	Exabyte	8mm
TSIN		<b>X</b>					DAT	4mm

**Custom Media Format Charges** Where possible, Microware will honor requests to ship software products on custom media formats for an additional charge of \$100 per product.

**Software License and Warranty** All Microware software products listed herein are licensed on an "AS-IS" basis for use on a single computer system. The media is warranted from defects in material or workmanship for a period of 90 days from the date of purchase. Microware does not make any other warranties, express or implied. Warranties of merchantability and fitness for a particular purpose are expressly excluded. Complete license and warranty terms accompany each product and are available upon request from Microware.

**Software Support** All Microware end user software products include a 90-day "Hotline" Support Registration Card. When completed and returned to Microware, the support registration card entitles the customer to 90 days of free "Hotline" support from Microware's Customer Support Department. Microware will attempt to answer technical questions concerning proper product operation. However, this service is offered on a reasonable

efforts basis only and Microware may not be able to resolve every support request. Microware supports the software only if it is used under the conditions and for the purposes for which the software is designed.

***One-Year Support and Updates***

This service provides additional "Hotline" support and automatic updates for a specific software product for a period of one year after purchase. The One-Year Support does not modify or extend the software warranty listed in the preceding paragraph.

One-Year Support may be ordered at the time of purchase of a software product or anytime afterward. The fee for One-Year Support at the time of purchase is shown with each applicable product in this price list. The fee for ordering One-Year Support after the purchase of the software product is 1 1/2 times the fee listed in this price list, and is only available for customers who can show valid proof of purchase of the software.

***Prices***

All prices are quoted in US Dollars and are valid only for customers in the US and Canada. The price charged is the price in effect when Microware receives the order. Prices, terms and conditions in this price list supercede all previous price lists and catalogs, and are subject to change without notice.

***Payment Method***

For US orders, Microware accepts major credit cards, COD, prepayment or purchase orders with net 30 terms subject to Microware credit approval.

***Credit Cards***

Microware honors MasterCard, VISA and American Express charge cards.

***Sales Tax***

Customers will be charged applicable sales taxes unless a sales tax exemption certificate has been provided to Microware and is referenced on the purchase order.

***Shipping***

Standard shipping method is UPS Ground Service. Alternative or express services will be honored where possible. All shipping costs will be billed to the customer.

***FOB Shipping Point***

Des Moines, Iowa, USA.

***Returned Merchandise***

For 30 days after date of purchase, Microware will accept returns of unopened, unused products for a full refund of the purchase price, less a restocking fee of 25 percent. Contact Microware to obtain an RMA number prior to returning any stock for refund.

***International Customers***

Microware has sales offices and authorized distributors worldwide. The international sales offices are included in the list on the following page. Contact Microware Corporate Headquarters for the name of the authorized distributor nearest you.

***Product Literature***

Detailed product information can be found in the "OS-9 Catalog" and other Microware publications. For more information on any product, contact your local Microware representative.

***Microware Offices***

**MICROWARE SYSTEMS CORPORATION**

**Corporate Headquarters**

1900 N.W. 114th Street  
Des Moines, IA 50325-7077  
Phone: (515) 224-1929  
or 1-800-475-9000  
Fax: (515) 224-1352  
Internet: info@microware.com

**Western Regional Office**

Phone: (408) 451-3999  
Fax: (408) 456-8814

**Business Development Office**

**Western Region**

Phone: (408) 451-3999  
Fax: (408) 451-3998

**Southeastern Regional Office**

Phone: (305) 946-9280  
Fax: (305) 946-9350

**South Central Regional Office**

Phone: (512) 794-0247  
Fax: (512) 794-0251

**Microware Systems K.K. (Japan)**

Phone: (81) 3 3257 9000  
Fax: 81) 3 3257 9200

**Microware Systems France**

Phone: (33) 42 58 63 00  
Fax: (33) 42 58 62 28

**Midwestern Regional Office**

Phone: (216) 995-0555  
Fax: (216) 995-0619

**Business Development Office**

**Eastern Region**

Phone: (302) 792-8360  
Fax: (302) 792-0777

**Northeastern Regional Office**

Phone: (603) 929-4107  
Fax: (603) 929-4233

**East Coast Field Application Engineer**

Phone: (603) 627-8742  
Fax: (603) 627-8742

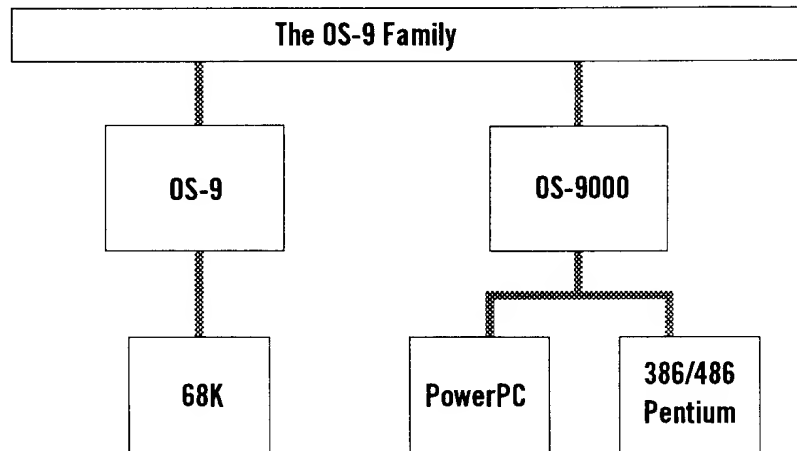
**Microware Systems (U.K.) Ltd**

Phone: (44) 1703 601990  
Fax: (44) 1703 601991

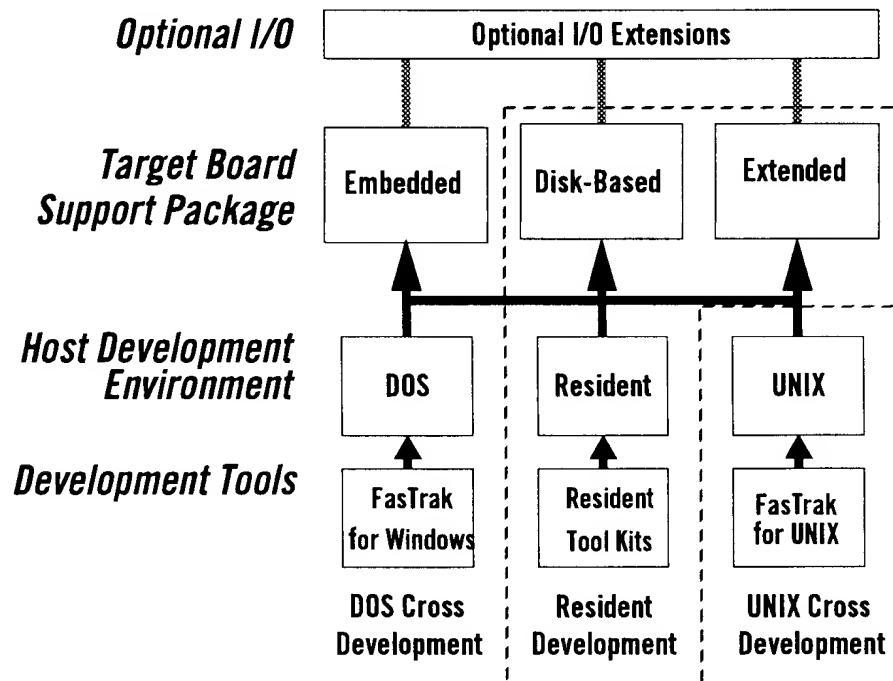
## THE OS-9 FAMILY

### Overview

As illustrated in the diagram below, Microware's OS-9 Family encompasses both the OS-9 and OS-9000 Real-Time Operating Systems. The OS-9 Family provides options for development using several processors—from the Motorola family of 68K processors to the very latest in PowerPC and Pentium.



Microware's end user software products are packaged to offer the greatest flexibility in target environment, I/O support and development options. End user products are available for specific single board computers, target I/O subsystems, and resident and cross development. The diagram below illustrates the various levels of products covered in this price list. Please note that Resident Development is available only for Disk-Based and Extended target environments.



## OS-9 FAMILY END USER SOFTWARE PRODUCTS

### Board Support Packages

**68K Processors** Board Support Packages (BSPs) are preconfigured versions of popular Motorola single board computers based on 68K processors. Four different versions of Board Support Packages are available. Each version contains a specific set of the I/O File Managers and drivers that provide a specific level of I/O functionality. The four versions of the Board Support Packages, and their contents, are listed below.

Component Included	Embedded	Embedded Node	Disk-Based	Extended
Standard OS-9 Kernel	x	x	x	x
Pipe File Manager	x	x	x	x
Serial File Manager (SCF)	x	x	x	x
OS-9 Disk File Manager (RBF)			x	x
PC-DOS File Manager (PCF)			x	x
Tape File Manager (SBF)			x	x
Internet Support Pak (ISP)		x		x
SLIP/CSLIP		x		x
NFS Client (NFSC)		x		x

Each Board Support Package includes:

- Bootstrap PROM (CPU-specific)
- BSP Software Distribution Media (CPU and BSP version specific)
- BSP Installation Manual
- 90-Day "Hotline" Support Registration Card

The BSP Software Distribution Media contains the OS-9 Family software modules included in the BSP version ordered, and is available on UNIX, DOS or Resident format media. For more information, please refer to the appropriate OS-9 Family BSP data sheet.



**OS-9 for 68K Board Support Package Pricing**

I/O Functionality	CPU Module	Host Development System	Host Media Format Code	Product Code <sup>†</sup>	Price Each	One-Year Support	Support Price
Embedded	147,162,166, 167 or 177	OS-9	38U0/58U0/TCIN	EMB6830**EI	\$ 500	EMB68NA**AS	\$150
		UNIX	TCIN/TEIN/TSIN	EMBUN30**EI	500	EMBUNNA**AS	150
		DOS	3DOS	EMBMD30**EI	500	EMBMDNA**AS	150
Disk-Based	147,162,166, 167 or 177	OS-9	38U0/58U0/TC2B	DKB6830**EI	750	DKB68NA**AS	150
		UNIX	TCIN/TEIN/TSIN	DKBUN30**EI	750	DKBUNNA**AS	150
		DOS	3DOS	DKBMD30**EI	750	DKBMDNA**AS	150
Embedded Node	147,162,166, 167 or 177	OS-9	38U0/58U0/TCIN	END6830**EI	1000	END68NA**AS	200
		UNIX	TCIN/TEIN/TSIN	ENDUN30**EI	1000	ENDUNNA**AS	200
		DOS	3DOS	ENDMD30**EI	1000	ENDMDNA**AS	200
Extended	147,162,166, 167 or 177	OS-9	38U0/58U0/TC2B	EXT6830**EI	1250	EXT68NA**AS	250
		UNIX	TCIN/TEIN/TSIN	EXTUN30**EI	1250	EXTUNNA**AS	250
		DOS	3DOS	EXTMD30**EI	1250	EXTMDNA**AS	250

<sup>†</sup> Replace "\*\*\*" with "47" for the 147, "62" for the 162, "66" for the 166, "67" for the 167, and "77" for the 177.

**PowerPC Processors** Board Support Packages are also available for PowerPC processors. Currently, PowerPC supports Embedded, Embedded Node, and Extended configurations.

Each Board Support Package includes:

- Bootstrap PROM (CPU-specific)
- BSP Software Distribution Media (CPU and BSP version specific)
- 90-Day "Hotline" Support Registration Card

I/O Functionality	CPU Module	Host Development System	Host Media Format Code	Product Code <sup>†</sup>	Price Each	One-Year Support	Support Price
Embedded	1603	OS-9/68K	38U0/58U0/TCIN	EMB6820**EI	\$1000	EMB68NA**AS	\$200
		OS-9/X86	38HD	EMBI320**EI	1000	EMBI3NA**AS	200
		UNIX	TCIN/TEIN/TSIN	EMBUN20**EI	1000	EMBUNNA**AS	200
		DOS	3DOS	EMBMD20**EI	1000	EMBMDNA**AS	200
Embedded Node	1603	OS-9/68K	38U0/58U0/TCIN	END6820**EI	1500	END68NA**AS	300
		OS-9/X86	38HD	ENDI320**EI	1500	ENDI3NA**AS	300
		UNIX	TCIN/TEIN/TSIN	ENDUN20**EI	1500	ENDUNNA**AS	300
		DOS	3DOS	ENDMD20**EI	1500	ENDMDNA**AS	300
Extended	1603 Ultra 603 Ultra 604	OS-9/68K	38U0/58U0/TCIN	EXT6820**EI	1750	EXT68NA**AS	350
		OS-9/X86	38HD	EXTI320**EI	1750	EXTI3NA**AS	350
		UNIX	TCIN/TEIN/TSIN	EXTUN20**EI	1750	EXTUNNA**AS	350
		DOS	3DOS	EXTMD20**EI	1750	EXTMDNA**AS	350

<sup>†</sup> Replace "\*\*\*" with "63" for the 1603, "P3" for the Ultra 603, and "P4" for the Ultra 604.

## PC Development Packages

**PC Development Pak** The PC Development Pak contains a ready-to-run copy of Embedded OS-9 Family configured for standard X86 PC platforms. It includes a full suite of C language development tools designed to turn a PC into a complete OS-9 Family development workstation.

The PC Development Pak includes:

- Ultra C
- C Source Level Debugger
- $\mu$ MACS

**PC Run-Time Pak** The PC Run-Time Pak is a subset of the PC Development Pak. It contains a ready-to-run copy of OS-9 Family configured for standard X86 PC systems but does not include any application development tools. It provides a convenient means to obtain multiple run-time licenses without having to sign a volume distribution agreement.

Description	Processor Family Supported and Media Format Code	Product Code	Price	One-Year Support	Support Price
PC Development Pak	X86:38HD	DEVPCATI3EI	\$1000	DEVPCATI3AS	\$200
PC Run-Time Pak	X86:38HD	RDPPCATI3EI	600	RDPPCATI3AS	150

## Basic I/O Extensions

I/O Support Packages are File Manager and/or Device Driver packages configured for specific peripheral boards. These basic I/O packages provide support for core system extensions. Each package contains a file manager and driver binaries, as well as development utilities and installation source code where appropriate. Full user documentation and 90 days of "Hotline" support are also included.

**Driver Pak** The Driver Pak contains source examples of SCF serial, parallel and clock device drivers. It provides an excellent starting point for creating new SCF-type device drivers.

Each Driver Pak includes:

- Source and Object Code for ACIA, PIA and Clock Device Drivers
- Design and Installation Documentation

**SCSI Pak** The SCSI Pak contains sample device driver source code files for programmers who wish to install disk or tape SCSI devices on their OS-9 Family/68K systems.

Each SCSI Pak includes:

- Disk and Tape SCSI Driver Source Code
- Installation and Customization Information

**PC File Manager Pak** The PC File Manager Pak contains the PC-DOS File Manager which provides read/write support for DOS formatted floppy diskettes. This package is ready-to-run on existing OS-9 Family/68K systems whose disk drivers are configured to support this package. Contact your system manufacturer to determine if their disk drivers support this package.

Description	Processor Family Supported and Media Format Code	Product Code	Price Each	One-Year Support	Support Price
Driver Pak	68K:38U0/58U0/TCIN	DRV683068EI	\$ 750	DRV68NA68AS	\$150
	X86:38HD/TC2F	DRVPINAPIEI	500	DRVPINAPIAS	150
SCSI Pak	68K:38U0/58U0/TCIN	DRVSC3068EI	1000	DRVSCSI68AS	200
PC File Manager Pak	68K:38U0/58U0/TCIN	PCF68NA68EI	200	PCF68NA68AS	150

## Network I/O Extensions

The following I/O packages provide extended support for networked target systems. Full user documentation and 90 days of "Hotline" support are also included.

**Internet Support Pak** The Internet Support Pak (ISP) allows the OS-9 Family to communicate with other systems on an Ethernet (TCP/IP) network. For more information, see Microware's Internet Support Pak data sheet (INT9KNA9KDS).

The Internet Support Pak also contains standard SLIP and CSLIP protocols which support TCP/IP communications through standard SCF device drivers. SLIP is easy to add to Extended OS-9 Family/68K systems and communicate between OS-9 Family and other systems that support SLIP Internet protocol or CSLIP compressed header algorithm.

**Network File System** The Network File System/Remote Procedure Call Pak (Client & Server) provides a complete implementation of the industry standard NFS environment. This package provides both NFS Server and NFS Client capabilities, and includes a set of RPC development tools for creating and implementing distributed applications.

The Network File System/Remote Procedure Call Pak (Client Only) contains the NFS modules required to allow OS-9 Family systems to mount a remote system's disk as a locally attached device. For more information, refer to the NFS brochure (NFS68NA68SL).

Description	Ethernet Cards	Processor Family Supported and Media Format Code	Product Code	Price Each	One-Year Support	Support Price
Internet Support Pak	CMC ENP*	68K:38U0/58U0/TCIN	INT6820PIEI	\$1000	INT68ENPIAS	\$200
	MVME 374	68K:38U0/58U0/TCIN	INT68NA37EI	1000	INT68NA37AS	200
	CMC 640	X86:38HD/TC2F	INTPC64I3EI	400	INTPC64I3AS	150
	Ethercard PLUS 16	X86:38HD/TC2F	INTPC13I3EI	400	INTPC13I3AS	150
* The CMC ENP-10 Internet Support Pak is available for CMC's ENP-10i, ENP-101, ENP-100i and ENP-1001 series of Ethernet controllers. It does not support the ENP-10 or ENP-10 Plus Ethernet controllers.						

Description	Procedure	Processor Family Supported and Media Format Code	Product Code	Price Each	One-Year Support	Support Price
Network File System	Client & Server	68K:38U0/58U0/TCIN	NFS681368EI	\$1250	NFS68NA68AS	\$250
		X86:38HD/TC2F	NFSI3NAI3EI	400	NFSPINA13AS	150
	Client Only	68K:38U0/58U0/TCIN	NC0681368EI	250	NC068NA68AS	150
		X86:38HD/TC2F	NC0I3NAI3EI	150	NC0I3NAI3AS	150

## X Windows I/O Extensions

***X Windows Client Development Pak*** The OS-9 Family/X Windows Client Development Pak contains all of the X Windows development libraries and tools required to create an X Window Client application. The resulting X Client application executes under the control of the OS-9 Family, and can display its output on either a remote X Server such as a UNIX workstation or X Terminal, or on an OS-9 Family system that has the OS-9 Family/X Server Pak installed. For more information, refer to OS-9 Family/X Windows data sheet (XNANANANADS).

Each X Windows Client Development Pak contains:

- X Development Libraries
- X Client Control and Management Programs
- Sample X Client Application Programs
- O'Reilly and Associates X Windows User Documentation

***X Windows Client Run-Time Pak*** The OS-9 Family/X Windows Client Run-Time Pak provides all of the OS-9 Family modules required to run a previously developed X Client application on a target OS-9 Family system that does not have the X Client Development Pak installed. The Run-Time Pak requires that the OS-9 Family target system have the Internet Support Pak installed. For more information, refer to OS-9 Family/X Windows data sheet (XNANANANADS).

Each X Windows Client Run-Time Pak contains:

- X Run-Time Subroutine Library Module
- X Client Control and Management Programs
- Installation Documentation

***X Windows Server Support Pak*** The OS-9 Family/X86 X Window Server Support Pak contains a drop-in, binary copy of an OS-9 Family/X Server configured for a specific set of PC/AT SVGA video boards. By adding this package and one of the supported video boards to an existing extended OS-9 Family system, any X Client application, either running locally or on another node in a network, can use the OS-9 Family system as the X Server. The target OS-9 Family system must be Ethernet capable. For more information, refer to the OS-9 Family/X Windows data sheet (XNANANANADS).

Each X Window Server Support Pak contains:

- X Server Driver for PC SVGA video boards
- X Client Utilities
- X Server Installation and User Documentation

***Motif Development Pak*** The Motif Development Pak for OS-9 Family/68K is a robust implementation of the Open Software Foundation's (OSF) GUI package. With the Motif Development Pak, designers can build and run X Windows applications that utilize the advanced features of the OSF/Motif user interface. The X Window Client Development Pak is required for proper operation of the Motif Development Pak.

Each Motif Development Pak contains:

- Motif Toolkit: Resource, Widget and User Interface Language Libraries
- Motif User Interface Language Compiler
- Motif Window Manager
- OSF/Motif User Documentation

**Motif Run-Time Pak** The Motif Run-Time Pak for OS-9/68K contains a copy of the OS-9 Family Motif Window Manager. The Run-Time Pak is designed for OEMs and end users that want to run the Motif Window Manager on an OS-9 Family system, but do not require the Motif application development tools.

Each Motif Run-Time Pak contains:

- Motif Window Manager and Resource Files
- Motif User's Guide
- Installation Instructions

Product	Host	Media Format Code	Product Code	Price	One-Year Support	Support Price
X Windows Client Development Pak	68K	TCIN	XDP685220EI	\$2500	XDP68NA20AS	\$500
	X86	TC2F	XDPI3NAI3EI	600	XDPI3NAI3AS	150
	UNIX	TCIN/TEIN/TSIN	XDPUN5220EI	2500	XDPUNNA20AS	500
X Windows Run-Time Pak	68K	TCIN	XRT685220EI	250	XRT68NA20AS	150
	X86	TC2F	XRTI3NAI3EI	150	XRTI3NAI3AS	150
	UNIX	TCIN/TEIN/TSIN	XRTUN5220EI	250	XRTUNNA20AS	150
X Windows Server Support Pak	X86	TC2F	XSPI3NAI3EI	400	XSPPINA13AS	150
Motif Development Pak	68K	TCIN	XMDPIA220EI	1000	XMDPINA20AS	200
	UNIX	TCIN/TEIN/TSIN	XMDUNNA20EI	1000	XMDUNNA20AS	200
Motif Run-Time Pak	68K	TCIN	XMTPINA20EI	150	XMTPINA20AS	150
	UNIX	TCIN/TEIN/TSIN	XMTUNNA20EI	150	XMTUNNA20AS	150

## Resident Development Tools

Microware offers a wide variety of industry standard programming languages and advanced software tools for application development. Each product includes the product object code, language run-time system (if applicable), a User's Manual and 90-day "Hotline" Software Support Service.

**OS-9 Tool Kit** The OS-9 Tool Kit is a set of software development and productivity tools designed to run on Disk-Based or Extended OS-9 Family/68K systems. These tools provides a complete C language programming environment for resident development under OS-9. For more information, refer to Microware's OS-9 Product Overview (POV68NA68SL).

The Tool Kit includes:

- Ultra C
- C Source Level Debugger
- MShell
- $\mu$ MACS
- OS-9 Print Spooler
- COM Serial Communications Package

Description	Processor Family Supported and Media Format Code	Product Code	Price	One-Year Support	Support Price
OS-9 Tool Kit	68K:38U0/58U0/TCIN	TKT681268EI	\$1750	TKT68NA68AS	\$350

## High Level Languages and Debuggers

**BASIC** Microware BASIC for 68K processors combines traditional BASIC with modern structured programming concepts within a unique interactive programming environment.

**BASIC Run-Time Pak** The BASIC Run-Time system is designed for users who wish to run BASIC modules, but do not require the BASIC development environment.

**System State Debugger** The System State Debugger for 68K processors is intended for debugging both system and user state programs resident on an OS-9 Family system.

Description	Processor Family Supported and Media Format Code	Product Code	Price	One-Year Support	Support Price
Microware BASIC	68K:38U0/58U0/TCIN	BAS68NA68EI	\$500	BAS68NA68AS	\$150
BASIC Run-Time System*	68K:38U0/58U0/TCIN	BRT68NA68EI	100	N/A	N/A
System State Debugger	68K:38U0/58U0/TCIN	SSD682568EI	300	SSD68NA68AS	150
* Does not include Software Support Service or User's Manual.					

## OS-9 Family Cross Development Tools

**Ultra C** Microware's Ultra C ANSI C compiler is available on OS-9 Family systems to target either of Microware's operating systems. For example, an OS-9 Family PC-based system can be used as a development host for OS-9 Family cross development.

Description	Host Processor Family Supported and Media Format Code	Target	Product Code	Price	One-Year Support	Support Price
Ultra C Compiler	68K:38U0/58U0/TCIN	X86	ATC6812I3EI	\$1250	ATC68NAI3AS	\$250
	68K:38U0/58U0/TCIN	PPC	ATC68I3PPEI	1250	ATC68NAPPAS	250
	X86:38HD/TC2F	68K	ATCI31220EI	500	ATCI3NA68AS	150
	X86:38HD/TC2F	PPC	ATCI3I3PPEI	500	ATCI3NAPPAS	150



## Productivity Tools

**MShell** MShell provides an advanced user shell that features command line editing, command aliasing, and command and pathlist completion. It builds on the functionality of the standard MShell by providing a robust procedure file interpreter and extensive script language. For more information, refer to the MShell data sheet (MSH68NA68DS).

**QD MenuMaker** QD MenuMaker for X86 processors is a package that simplifies the development of application user interfaces which utilize the PC/AT graphics character set. This package makes it easy to create menus, readouts and control buttons using the graphics characters common to PC/AT hardware. QD MenuMaker includes a set of function libraries and a screen design tool that reduce the development effort involved in building menu-oriented screens.

Description	Processor Family Supported and Media Format Code	Product Code	Price	One-Year Support	Support Price
Microware MShell	68K:38U0/58U0/TC1N	MSH68NA68EI	\$300	MSH68NA68AS	\$150
	X86:38HD/TC2F	MSHI3NAI3EI	200	MSHI3NAI3AS	150
QD MenuMaker	X86:38HD/TC2F	MMGPCATI3EI	500	MMGPCATI3AS	150

## PC Cross Development Tools

***FasTrak for Windows*** FasTrak for Windows is a network-based product that provides a modular toolkit for host development systems and a set of server daemons for the OS-9 Family of target processors. Communication between hosts and targets is accomplished using TCP/IP over Ethernet or serial (SLIP) connections.

FasTrak for Windows' host toolkit is tightly integrated into the Windows File Manager and is logically divided into three functional modules:

- Makefile Editor Tool
- FTDBG Debugger Tool
- Target System Tool

All modules use the industry-standard graphical interface for user interaction, allowing push-button control of a wide variety of development activities.

FasTrak for Windows uses many of the underlying development tools on the host platform, such as version control systems and text editors. FasTrak for Windows also includes Microware's Ultra C ANSI C Compiler and FTDBG Debugger — the only such tools specifically designed for creating highly-optimized, real-time applications for products using the OS-9 Family Real-Time Operating Systems.

### FasTrak for Windows Licenses

Number of Licenses	Host Description	Host Media Format Code	Target	Product Code	Price	One-Year Support	Support Price
Single Seat	Windows	3DOS	68K	FTW011220E1	\$2850	FTW01NA20AS	\$ 570
	Windows	3DOS	X86	FTW011213E1	2850	FTW01NA13AS	570
5 Seat	Windows	3DOS	68K	FTW051220E1	7500	FTW05NA20AS	1500
	Windows	3DOS	X86	FTW051213E1	7500	FTW05NA13AS	1500
10 Seat	Windows	3DOS	68K	FTW101220E1	10500	FTW10NA20AS	2100
	Windows	3DOS	X86	FTW101213E1	10500	FTW10NA13AS	2100
Additional single seats available for \$1425 each							

## UNIX Cross Development Tools

**FasTrak for UNIX** FasTrak for UNIX is a comprehensive software programming and management environment that provides seamless interaction with OS-9 target systems. FasTrak for UNIX's highly-integrated toolset simplifies and automates the task of creating, debugging, analyzing and managing complex real-time software development projects. FasTrak for UNIX can be used by individual programmers as a stand-alone development platform, or in a network-based distributed development environment as a group development platform.

FasTrak for UNIX includes the following:

- FasTrak Toolset: Workbench, Text Editor Tool, Makefile Editor, FTDBG Debugger, Target System Tool and HyperHelp
- Ultra C ANSI C Compiler, assembler and linker
- Single-server, 10-workstation license
- One set of printed documentation and 90-day "Hotline" support

FasTrak for UNIX uses the X Window System and either Motif or OpenWindows as its graphical user interface. Communication with the target is via TCP/IP over Ethernet or serial (SLIP) connections. The FasTrak for UNIX base license includes the right to install FasTrak materials on one network server and run FasTrak on a total of ten workstations concurrently. For more information, please refer to Microware's FasTrak brochure (FASNANANASL) or the FasTrak for UNIX data sheet (FASNANA20DS).

FasTrak for UNIX 10-Seat License

UNIX Host Description*	Host Media Format Code	Target	Product Code	Price	One-Year Support	Support Price
Sun 4/SunOS V4.1.2	TCIN/TEIN	68K	FASS41220EI	\$14500	FASSUN420AS	\$2900
	3DOS	X86	FASS412I3EI	14500	FASSUN4I3AS	2900
Sun 4/Solaris V2.3	TCIN/TEIN	68K	FASSL1220EI	14500	FASSLNA20AS	2900
	3DOS	X86	FASSL12I3EI	14500	FASSLNAI3AS	2900
HP 9000 Series 700/800/HP-UX	TSIN	68K	FASH71220EI	14500	FASHP9720AS	2900
	3DOS	X86	FASH712I3EI	14500	FASH7NAI3AS	2900
HP 9000 Series 300/HP-UX	TCIN	68K	FASH31220EI	14500	FASHP9320AS	2900
	3DOS	X86	FASH312I3EI	14500	FASH3NAI3AS	2900
SGI IRIS/IRIX R4	TCIN/TEIN	68K	FASSG1220EI	14500	FASSGNA20AS	2900
	3DOS	X86	FASSG12I3EI	14500	FASSGNAI3AS	2900
RS6000/AIX V3	TEIN	68K	FASR61220EI	14500	FASR6NA20AS	2900
	3DOS	X86	FASR612I3EI	14500	FASR6NAI3AS	2900
* For information regarding FasTrak on other standard UNIX platforms, contact Microware.						

## OS-9 Family Documentation

Microware offers individual copies of software documentation for evaluation or educational use. Microware reserves the right to decline documentation orders, which are in Microware's opinion, intended for any other purpose.

	Description	Product Code (OS-9/68K)	Product Code (OS-9/X86)	Price
<b>Operating System</b>	Using OS-9 /OS-9000	USR68NARAMO	UPRPINAPIMO	\$ 75
	Technical Manual	TEC68NARAMO	OSTPINAPIMO	95
	I/O Technical Manual	TIO68NARAMO	OIOPINAPIMO	95
	Utilities	UTL68NARAMO	N/A	95
	Manual Set	DPKMSET68MO*	PROPINAPIMS†	295
	Creating a System Security Module	SSM68NA68CM	N/A	35
<b>Networking</b>	PC File Manager (PCF) Manual	PCF68NARBMO	N/A	45
	Using OS-9 Family/Internet	INT68NARCMO	INTPINAPIMO	50
	OS-9/NET Manual Set	MNLSSETSNET	N/A	50
	NFS/RPC User's Manual	NFSPINAPIMO	NFSPINAPIMO	50
	NFS Client Installation Manual	NFSINSTPAMO	NFSINSTPAMO	25
<b>Multimedia/ Graphics</b>	ISDN Technical Manual	ISDPINAPIMO	ISDPINAPIMO	55
	QD MenuMaker User's Manual	N/A	MMGPCAT13MO	45
	Xlib Programming Manual	XLPPINAPIMO	XLPPINAPIMO	65
	Xlib Reference Manual	XLRPINAPIMO	XLRPINAPIMO	65
	X Window System User's Guide/Release 5	XWS5INAPIMO	XWS5INAPIMO	60
	X Window Systems Programmer's Supplement/Release 5	XR5PINAPIMO	XR5PINAPIMO	50
	X Toolkit Intrinsics Programming Manual	XIPPINAPIMO	XIPPINAPIMO	60
	X Toolkit Intrinsics Reference Manual	XIRPINAPIMO	XIRPINAPIMO	60
	OSF/Motif User's Guide	XMUPINAPIMO	XMUPINAPIMO	50
	OSF/Motif Style Guide	XMSPINAPIMO	XMSPINAPIMO	50
	OSF/Motif Programmer's Guide	XMGPINAPIMO	XMGPINAPIMO	65
	OSF/Motif Programmer's Reference	XMRPINAPIMO	XMRPINAPIMO	65
	Ultra C Manual Set	ATC68I220MS	ATCPINAPCMO	225
<b>Languages/ Debuggers</b>	Microware BASIC User's Manual	BAS68NA68MO	N/A	50
	ASM/LINK User's Manual	ALKPIRBPIMO	ALMPINAPIMO	50
	Source Level Debugger Manual	SLDPINAPIMO	SLDPINAPIMO	85
	K&R C Compiler User's Manual	CCC68NA68MO	CCCPINAPIMO	45
	System State Debugger Manual	SSD68NA68MO	N/A	40
<b>Development</b>	ROMBug User's Manual	RBG68NARBMO	RBGPINAPIMO	40
	μMACS User's Manual	UMC68NA68MO	UMCPINAPIMO	35
	Using FasTrak	FASPINAPIMO	FASPINAPIMO	100
	FasTrak Administrator's Guide	FASSYADPIMO	FASSYADPIMO	35
<b>Misc.</b>	"OS-9 Insights, Edition 3.0" by Peter Dibble	INS68TE68MO	INS68TE68MO	\$75
	"The OS-9 Primer" by Mark A. Heilpern	PRI68RA68MO	PRI68RA68MO	45
	"Discovering CD-I" by Eric & Walden Miller	DCD68NA68BK	DCD68NA68BK	45
	"The OS-9 Catalog"	OS968NA68SL	CAT9KNA9KSL	FREE
	OS-9 Binder/Slipcover	WNBNDRLPC	WNBNDRLPC	15
* Includes Using OS-9, OS-9 Technical Manual, OS-9 I/O Technical Manual, OS-9 Utilities, ROMBug Manual, μMacs User's Manual, PC File Manager Manual, Using OS-9/Internet and OS-9/NFS Client Installation Manual				
† Includes Using OS-9000, OS-9000 Technical Manual, ASM/LINK User's Manual, Source Level Debugger Manual, μMacs User's Manual, and K&R C Compiler User's Manual				

## TECHNICAL SERVICES

Technical software support from Microware establishes a direct communication link between your firm and Microware's Customer Support Department. The customer support team is staffed by software engineers who have extensive backgrounds with the OS-9 Family and its related programming languages and productivity software. Access to Microware's software engineers can save valuable time when installing or using any of Microware's real-time software products.

### ***Training and Education***

Microware regularly conducts OS-9 Family training seminars at our Des Moines, Iowa headquarters and throughout the United States. These seminars cover a wide variety of topics designed for the entire spectrum of OS-9 Family users. OS-9 Family training seminars are a combination of lectures, hands-on demonstrations and practice labs designed to strengthen OS-9 Family skills and improve programmer productivity.

Microware can also provide custom seminars designed to satisfy specific customer needs. To obtain a quote for custom or on-site OS-9 Family training seminars, please contact your local Microware representative.

Description	Product Code (OS-9/68K)	Product Code (OS-9/X86)	Days	DSM Price*	Non-DSM Price†
Starter	STS68NA68SM	STSPINAPISM	1	\$ 300	\$ 300
Intermediate	ITS68NA68SM	ITSPINAPISM	2	800	900
Advanced	ATS68NA68SM	ATSPINAPISM	2	800	900
Intermediate/Advanced	IAS68NA68SM	IASPINAPISM	4	1400	1650
Internals Seminar	INS68NA68SM	N/A	1	500	600
Device Driver Seminar	DTS68NA68SM	N/A	2	900	1000
Internet Seminar	INT68NA68SM	INT68NA68SM	2	900	1000
* DSM Prices are for any class held at Microware's Corporate Headquarters in Des Moines, Iowa.					
† Non-DSM Prices are for any class held at a location other than Microware's Corporate Headquarters (excluding custom and on-site classes).					

### ***Premium Support Service***

The Premium Support Service is designed for users who frequently need telephone assistance concerning all of Microware's software products and wish to establish a close technical rapport with Microware's software engineering staff. With this service, product discrepancies reported to Microware are usually answered within 48 hours. Microware's response will consist of an estimated correction time and a work-around or patch where possible.

Description	Product Code	Price
Premium Support Service	PSS68NA68SX	\$1250

**Consulting and Installation  
Services**

Microware's Consulting and Installation Service Group is designed to assist customers who require product customization or installation services. The C & I group can help keep your project on time and on schedule by assisting with all facets of the OS-9 Family product development process. Two standard types of service are provided.

Consulting Services are available for software design and debugging, as well as other custom consulting needs. Consulting Services are available on an hourly fee basis, with a minimum of 8 hours of consulting time per project.

Installation Services are available for porting the OS-9 Family to a new system, writing OS-9 Family device drivers for specific hardware or developing new applications. All custom installation services are quoted on request. Customers interested in installation services should forward complete hardware technical documentation to their Microware representative.

Description	Product Code	Price
Consulting Services	CONPINA68EI	\$150 per hour*
Installation Services	IST68NA68EI	Special Quote
* Plus travel and/or lodging expenses, if any.		

Microware, OS-9 and OS-9000 are registered trademarks of Microware Systems Corporation. Atomic OS-9, Embedded OS-9, Disk-Based OS-9, Extended OS-9, OS-9 Network File System, OS-9/ X Windows, Ultra C, FasTrak,  $\mu$ MACS, Microware BASIC, MShell and ISP are all trademarks of Microware. HP and HP-UX are trademarks of Hewlett-Packard Corporation. IBM and PC-DOS are trademarks of International Business Machines Corporation. AMD is a trademark of Advanced Micro Devices, Inc. UNIX is a trademark of AT&T. VAX and VMS are trademarks of Digital Equipment Corporation. SUN is a trademark of Sun Microsystems, Inc. POLYTRON, PolyMake and PolyShell are trademarks of POLYTRON Corporation. OSF/Motif is a trademark of the Open Software Foundation, Inc. Siemens is a trademark of Siemens AG. HyperHelp is a trademark of Bristol Technology Incorporated. UL and all associated marks are trademarks or registered trademarks of Underwriters Laboratories. All other brand or product names are trademarks or registered trademarks of their respective holders.

© 1995 Microware Systems Corporation. All Rights Reserved. Reproduction of this document, in part or whole, by any means, electrical or otherwise, is prohibited, except by written permission from Microware Systems Corporation.

Product Code: PRLNANANASL

***microware***

**MICROWARE SYSTEMS CORPORATION**

1900 N.W. 114th Street • Des Moines, Iowa 50325-7077

Phone: (515) 224-1929 • Fax: (515) 224-1352

Internet: [info@microware.com](mailto:info@microware.com)

